

MIKHAYLOV, Konstantin Fedorovich; PREDTECHENSKAYA, N., red.; SHAFETA, S.,  
tekhn. red.

[Manual for oil-field mechanics] Spravochnik mekhanika neftepro-  
mysla. Kiev, Gos. izd-vo tekhn. lit-ry USSR, 1961. 363 p.

(MIRA 14:6)

(Oil fields--Equipment and supplies)

SNARSKIY, Aleksandr Nikolayevich, doktor geologo-mineral. nauk, prof.;  
FREDTECHENSKAYA, N.F., red.; POSMETUKHIN, N.A., tekhn. red.

[Geological fundamentals of the physics of an oil-bearing layer]  
Geologicheskie osnovy fiziki neftyanogo plasta. Kiev, Gos. izd-vo  
tekhn. lit-ry USSR, 1961. 247 p. (MIRA 15:6)  
(Petroleum geology) (Gas, Natural--Geology)

SKLYAR, Vladimir Tikhonovich; LEBEDEV, Yevgraf Venediktovich; .  
PREDETECHENSKAYA, N.F., red.; MATUSEVICH, S.M., tekhn. red.

[Petroleums of the Ukraine; composition and properties] Nefti  
Ukrainy; sostav i svoistva. Kiev, Gos.izd-vo tekhn.lit-ry  
USSR, 1962. 298 p. (MIRA 15:7)  
(Ukraine--Petroleum--Analysis)

KUDELYA, Yevgeniy Stepanovich; PRILETECHENSKAYA, N.F., red.; GUSAROV, K.F.,  
tekhn. red.

[Spectrum analysis of metals and alloys; photographic methods]  
Spektral'nyi analiz metallov i splavov; fotograficheskie metody.  
Kiev, Gos.izd-vo tekhn. lit-ry JSSR, 1961. 230 p. (MIRA 14:12)  
(Metals--Spectra) (Spectrophotometry)

PREDTECHENSKIY, A.A.

Old uplift in southern Siberia. Geol. i geofiz. no.5:3-13  
'60. (MIRA 13:9)

1. Sibirskiy nauchno-issledovatel'skiy institut geologii,  
geofiziki i mineral'nogo syr'ya.  
(Siberia--Geology)

PRÉDTECHENSKIY, A.A.

Aldan and Lena stages of the Lower Cambrian. Trudy SNIIGGIMS  
no.24:5-9 '62. (MIRA 16:10)

PREDTECHENSKIY, A.A.; SHCHEGLOV, A.P.

Biostratigraphic scheme of Lower Cambrian sediments in the  
Altai-Sayan fold area. Trudy SNIIGGIMS no.24:10-22 '62.

(MIRA 16:10)

3(2)

SOV/132-59-7-5/17

AUTHOR: Predtechenskiy, A.A.

TITLE: Against Formalism in Geological Mapping

PERIODICAL: Razvedka i okhrana nedr, 1959, Nr 7, pp 18-21 (USSR)

ABSTRACT: The author finds that a successful compiling of geological maps is based on the conscientious attitude of geologists and on the impartial solution of all litigable problems by both the author and the editing board, taking into consideration all latest geological data. This is not always done, says the author. On the directives of the Ministerstvo geologii i okhrany nedr SSSR (Ministry of Geology and Conservation of Mineral Resources of the USSR), the Vsesoyuznyy geologicheskii institut (All-Union Geological Institute) (VSEGEI) published instructions concerning the compilation of geological maps, which to a large extent improved the geological mapping. At present, many geological maps of Siberia are being prepared for publication and, in this connection, the creation of unified conventional

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Against Formalism in Geological Mapping

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signs and a mutual agreement on legends (denomination of rock formations, of geological suites etc) are of utmost importance. For this a Stratigraficheskiy komitet (Stratigraphic Committee) was created in 1956 and its decisions were binding. Some of these decisions applied to certain problems of stratigraphy of different Siberian regions became out of date in the light of latest survey and must be revised. The author also regrets the lack of collaboration of specially created scientific editing committees with the working geologists of various industrial organizations. He cites the case of compiled maps of the East Sayan region. In 1959, geologists compiled a new scheme of Cambrian and Devonian rock formations but the Scientific Editing Council of the VSEGEI ignored the 4-year work and imposed the schemes elaborated in 1956, and the geologists were obliged to "adjust" their maps to obsolete requirements. The author also blames some geologists who keep using names they have given to certain geological formations even when these formations already have more

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Against Formalism in Geological Mapping

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appropriate names on the adjoining lists of maps.

ASSOCIATION:SNIIGGIMS

Card 3/3

L 08099-67 EWT(d)/EWT(m)/EWP(h)

ACC NR: AP6029979

SOURCE CODE: UR/0413/66/000/015/0192/0192

INVENTOR: Predtechenskiy, A. N.; Pevzner, A. G.; Skuratovich, B. I.

27  
B

ORG: none

TITLE: Method for loading the control sticks of flight trainers. Class 42, No. 183979

SOURCE: Izobret prom obraz tov zn, no. 15, 1966, 192

TOPIC TAGS: ground trainer, pilot training, flight simulation, training equipment

ABSTRACT: An Author Certificate has been issued for a method for loading the control sticks of flight trainers (see Fig. 1). To lower the cost of the experiment and to

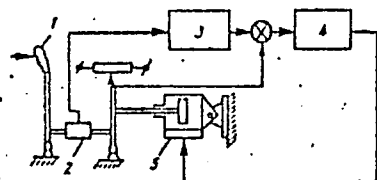


Fig. 1. Control stick loading system

- 1 - Control stick; 2 - potentiometer;
- 3 - simulation device; 4 - amplifier;
- 5 - steering engine.

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UDC: 620.178

L 08099-67

ACC NR: AP6029979

increase efficiency, forces from the stick are transmitted to an electrical potentiometric transducer, from which the obtained signal is directed into a device which simulates the kinematic and dynamic systems of control; after this, the signal is amplified and sent to the steering engine, which shifts the control stick to an angle proportional to the value of the obtained signal. Orig. art. has: 1 figure. [KT]

SUB CODE: 01, 05/ SUBM DATE: 27Mar65

Card 2/2 *ml*

PREDTECHENSKIY, A.V. (Leningrad); KOL'TSOV, A.V. (Leningrad)

Publication of the "History of the Academy of Sciences of the  
U.S.S.R.". Vop.ist.est. i tekhn. no.11:173-174 '61. (MIRA 14:11)  
(Academy of Sciences of the U.S.S.R.)

PREDTECHENSKIY, A.V.; KOL'TSOV, A.V.

History of the Academy of Sciences of the U.S.S.R. in the works of  
Soviet scientists. Vop. ist. est. i tekhn. no.6:151-159 '59.  
(MIRA 12:6)

(Academy of Sciences of the U.S.S.R.)

PREDTECHENSKIY, A. M.

20128 PREDTECHENSKIY, A. M. Diagnostika i klinika paneniy grudnom kletki i tipovyye diagnosticheskiye oshchibki. V sb i Voprosy grudnoy khirurgii. T.P.M., 1949, s. 129-37.

SO: LETOPIS ZHURNAL STATEY, Vol. 27, Moskva, 1949.

BISIKALOVA, V.M.; PREDTECHENSKIY, A.N.; ZHDANOVSKIY, V.I.

Effect of drug-induced sleep on the course of the vaccination process  
in rabbits vaccinated with living tularemia vaccine. Zhur.  
mikrobiol.epid. i immun.28 no.12:98-101 D '57. (MIRA 11:4)

1. Iz Saratovskogo meditsinskogo instituta.

(TULAREMIA, immunology,

vacc. with living vaccine, eff. of sleep ther. in rabbits  
(Rus)

(SLEEP, effects,

on immun. response to living tularemia vaccine in rabbits  
(Rus)



PREDTECHENSKIY, A.V.; GOLANT, V.Ya.; BESSMERTNYI, A.S., red.; LEVO-  
NEVSKAYA, L.G., tekhn.red.

[The cradle of Russian science; historical studies on the  
scientific institutions of the Strelka, Vasil'yevskiy Island  
in Leningrad] Kulybel' russkoi nauki; istoricheskii ocherk  
o nauchnykh uchrezhdeniyakh Strelki Vasil'evskogo ostrova v  
Leningrade. Leningrad, Lenizdat, 1959. 253 p. (MIRA 13:5)  
(Leningrad--Science)

PREDTECHENSKIY B. I.

DECEASED 1958

*Sanitation*

see ILC

FREDTECHENSKIY, B.M., dotsent, kandidat tekhnicheskikh nauk.

"Principles of construction engineering." A.G.Paniutin. Reviewed by  
V.M.Fredtechenskii. Stroi.prom.33 no.2:47-48 P '55. (MLRA 8:4)  
(Building) (Paniutin, A.G.)

26(1)

PHASE I BOOK EXPLOITATION

SOV/1684

Predtechenskiy, Georgiy Pavlovich

Gazoturbinnyye ustanovki (Gas-turbine installations) Moscow,  
Gosenergoizdat, 1957. 376 p. 7,000 copies printed.

Ed.: Ye. N. Chernin; Tech. Ed.: A.A. Zabrodina

**PURPOSE:** This book is approved by the Main Administration of Polytechnic and Machine-building Vuzes of the Ministry of Higher Education, USSR, as a textbook for students of higher technical institutions. It may also be useful to engineers interested in the description, analysis, and theory of gas turbine power plants.

**COVERAGE:** The book is concerned with stationary steam turbines and mobile gas turbine power plants. It describes the fundamentals of thermodynamics and thermodynamic operational processes, basic theory of gas flow, the design of various turbine elements, open-cycle gas turbines with constant-pressure combustion chambers, and solid, liquid or gaseous fuel injection systems. Closed-cycle gas-turbines

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Gas-turbine Installations

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are also described. Diagrams of a nuclear gas turbine power plant are shown. Power plants with open-cycle gas turbines were not considered. Problems of gas turbine regulation are described superficially and aerodynamic calculations are omitted. The author expresses gratitude to Professor A.V. Shcheglyayev, Corresponding Member of the Academy of Science, USSR, and to Doctors of Technical Sciences, Professors I.I. Kirillov, M.P. Vukalovich, A.S. Yastrzhembskiy, and to Docent V.P. Bolyudov, Candidate of Technical Sciences, for many valuable remarks in the review of the manuscript, and he thanks Ye. N. Chernin, Engineer of the Leningrad Metal Works for his editorial work on the manuscript. The following Russian scientists who worked on the development of gas turbines before the war are mentioned: Engineer G.I. Zotikov (research on cycles); Professor V.M. Makovskiy (designer of an early model gas turbine); Professor Ya.I. Shnee (developed the work of Professor Makovskiy); Professor V.V. Uvarov (general research in gas turbines); Professor A.A. Radtsig, Corresponding Member of the Academy of Science, USSR (theory of thermal processes in steam turbines); Academicians B.S. Stechkin, A.V. Levin, Ya. Ye. Rivosh (research on the strength of gas turbine components); Professors I.I. Kirillov and G.S. Zhiritskiy (theory of thermal and mechanical processes in gas turbines); P.K. Kazandzhan (methods of determining characteristics of gas turbines in changeable

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Gas-turbine Installations

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operating conditions); Professors A.V. Shcheglyayev, I.I. Kulagin, A.A. Lomakin and Engineers V.F. Khas, B.M. Reshin, A.A. Lyulka (development of gas turbines). In the postwar period work on the development of gas turbines in the USSR has been concentrated in the following institutions: All-Union Thermal and Technical Institute imeni F.E. Dzerzhinskiy, Central Turbine-Boiler Institute imeni I.I. Polzunov, Heat Power Institute of the Academy of Sciences, USSR, All-Union Central Scientific Institute of the Ministry of the Shipbuilding Industry. The leading centers of gas turbine production in the USSR are: Leningradskiy Metallicheskiy Zavod (Leningrad Metal Works), Nevskiy Mashinostroitel'niy zavod imeni Lenina (Neva Machine-building Plant imeni Lenin); and Voroshilovgradskiy parovozostroitel'niy zavod. There are 86 references, 74 Soviet, 9 English and 3 German.

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AVAILABLE: Library of Congress (TJ778.P7)

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6-17-59

PREDTECHENSKIY, Georgiy Pavlovich; CHERNIN, Ye.N., red.; ZABRODINA, A.A.,  
tekhn.red.

[Gas turbine installations] Gazoturbinnye ustanovki. Moskva, Gos.  
energ. izd-vo, 1957. 376 p. (MIRA 11:3)  
(Gas turbines)

PRUDTECHENSKIY, I. N.

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So: Sira SI-90-53, 15 Dec 1953

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PREDTECHENSKIY, I. M., NIKOL'SKIY, V. V. , GALAKHOV, P. M., and LETOV, A. S. "Ecological-economical Basis and Development of a System of Control Measures against Pests and Diseases in Uzbekistan," Itogi Nauchno-Issledovatel'skikh Rabot Vsesoyuznogo Instituta Zashchity Rastenii za 1935 Goda, 1936, pp. 217-221. 432.92 L54I

SO: SIRA - SI - 90-53, 15 December 1953

AUTHOR: Predtechenskiy, N. N. SOV/ 20-120-6-46/59

TITLE: The Stratigraphy of the Lower Devonian of the Tuva Trough  
(Stratigrafiya nizhnego devona Tuvinskoy kotloviny)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol. 120, Nr 6, pp1330-1333  
(USSR)

ABSTRACT: A huge sedimentary-volcanogenic mass is placed to the Lower Devonian of the Tuva district. It is stratified upon Silurian deposits and concordantly succeeded by the Eifelian stage. However, Lower Devonian could be separated only on a limited area on the left bank of the Ulug-Khem river and at the southern slope of the eastern and western Tannu-Ola ridge. Here Ostracoda and fish exuviae were found at some places. The remaining districts may be placed to the Lower Devonian only at certain conditions. The investigation of the Lower Devonian is complicated also by the fact that a slightly metamorphosed effusive mass similar as to its ~~character~~ appearance fills a huge part of the cross section in Tuva. Then, a survey of the corals and moss animals found here (findings by M. V. Zanin, A. L. Dodin and A. G. Sivov, determined by B. S. Sokolov, V. P. Nekhoroshev and R. P. Gratsianova) follows.

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The Stratigraphy of the Lower Devonian of the Tuva Trough

SOV/ 20-120-6-46/59

These are partly Lower Devonian forms. In collaboration with V. A. Meleshchenko and Ya. S. Zubrilin the author gathered new material in 1954. On the occasion of the new determination of the collection by A. G. Sivov and of the material collected by the author M. A. Rzhonsnitskaya found no Devonian but Silurian forms. The same holds also for the revision of the corals of the collection by A. L. Dodin carried out by B. S. Sokolov. The facts mentioned showed that the effusive sedimentary mass formerly separated as Lower Devonian is in reality of many different ages. Numerous transitions exist between the Silurian and the Devonian. In conclusion the author discusses the faunistically proved Lower Devonian formations which became known in connection with stratigraphic investigations in the course of the last two years. Three series were separated in a complete cross section on the left bank of the Ulug-Khem river (B'yert-Dag chain): a) b'yertdagskaya (this name was given by Ya. S. Zubrilin), b) barykskaya and c) chaanevskaya. The latter should be placed more correctly to the Eifelian stage. In the south of Tuva Lower Devonian sediments were found on

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The stratigraphy of the Lower Devonian of the Tava Trough SOV/ 20-120-6-16/59

the basis of numerous findings of armored fish (Palaeoniscidae, Steraspidae and Cephalaspidae according to the determination by D. V. Goruchev). From the lithological point of view these sediments can be separated into two series: d) samagultayskaya and e) kendeyskaya. In the remaining districts a dumb sedimentary effusive mass is placed to the lower Devonian under certain conditions. It coalesced to kyzylbulakskaya. Probably it is of a different age. There are 5 references, 5 of which are Soviet.

ASSOCIATION: Vsesoyuznyy geologicheskii institut  
(All-Union Geological Institute)  
Krasnoyarskoye geologicheskoye upravleniye  
(Krasnoyarsk Geological Administration)

PRESENTED: March 17, 1958, by D. V. Malivkin, Member, Academy of Sciences, USSR

SUBMITTED: March 14, 1958  
Card 3/4

The Stratigraphy of the Lower Devonian of the Tuva Trough SOV/20-120-6-46/59

1. Geology---USSR 2. Paleocology 3. Geophysics

Card 4/4

VARVAK, P.M., prof., doktor tekhn.nauk, starshiy nauchnyy sotrudnik;  
GUBERMAN, I.O., starshiy inzh.; MIROSHNICHENKO, M.M., inzh.;  
~~PREDTECHENSKIY, N.D., inzh.~~ Prinimali uchastiye: AMIRO, I.Ya.,  
starshiy nauchnyy sotrudnik; DLUGACH, M.I., starshiy nauchnyy  
sotrudnik; BOBYR', B.A., inzh.; KUZNETSOVA, A.K., inzh.; PETRA-  
SHEN', R.N., inzh.; SOKOL'SKIY, M.M., inzh.. KAPLAN, Ya.L., red.  
izd-va; LABINOVA, N.M., red.izd-va

[Tables for designing rectangular slabs] Tablitsy dlia rascheta  
priamougol'nykh plit. Pod red. P.M.Varvaka. Kiev, Izd-vo Akad.  
nauk USSR, 1959. 418 p. (MIRA 12:11)

1. Institut stroitel'noy mekhaniki Akademii nauk USSR (for Varvak,  
Guberman, Amiro, Dlugach). 2. Vsesoyuznyy proyektno-izyskatel'skiy  
i nauchno-issledovatel'skiy institut "Gidroproyekt" im. S.Ya.Zhuk  
(for Miroshnichenko, Predtechenskiy, Bobyr', Kuznetsova, Petrashen',  
Sokol'skiy).

(Concrete construction--Tables, calculations, etc.)  
(Concrete slabs)

SOV-3-58-8-26/26

AUTHORS: Struve, V.V., Academician; Viatkin, M.P., Mavrodin, V.V.,  
Predtechenskiy, A.V., Revunenkov, V.G., Professors; Ste-  
fanikhin, V.V., ~~Docent~~ ; and Gussyatnikov, P.S., Candidate  
of Historical Sciences

TITLE: Letters to the Editor (Pis'ma v redaktsiyu) To Create the  
Scientific History of the Country's Vuzes (Sozdat' nauch-  
nuyu istoriyu vuzov strany)

PERIODICAL: Vestnik vysshey shkoly, 1958, Nr 8, pp 95 - 96 (USSR)

ABSTRACT: The authors point out the outstanding role which the coun-  
try's higher educational institutions have played in nat-  
ional and world's science, in training intellectual per-  
sonnel and in developing the country's industrial forces.  
They advocate the writing of a scientific history of every  
vuz and considers this to be a matter of urgency and of  
great educational importance.

Card 1/1

SOLOV'YEV, Vsevolod Konstantinovich; PREDTECHENSKIY, B.I., red.; VYSHIVKINA,  
A.S., red.; LYUDKOVSKAYA, N.I., tekhn.red.

[Physiological principles of training with gas masks] Fiziologi-  
cheskie osnovy trenirovki v protivogazakh. Moskva, Gos.izd-vo med.  
lit-ry, Medgiz, 1958. 102 p. (MIRA 12:12)  
(GAS MASKS)

PREDTECHENSKIY, N.D., inzh.

Using the optical method of investigating the stressed state of  
beams having an internal angle of  $120^\circ$ . Trudy Gidroproekta  
no.1:90-99 '58. (MIRA 11:9)

(Girders)

PREDTECHENSKIY, N.N.

Stratigraphy of the lower Devonian in the Tuva Depression.  
Dokl. AN SSSR 120 no.6:1330-1333 Je '58. (MIRA 11:9)

1.Vsesoyuznyy geologicheskii institut i Krasnoyarskoye geologicheskoye upravleniye. Predstavleno akademikom D.V. Nalivkinym.  
(Tuva Depression--Geology, Stratigraphic)



PREDTECHENSKIY, N.N.

Stratigraphy and facies of Devonian and lower Carboniferous  
sediments in the Us trough. Inform.sbor.VSEGEI no.21:5-11 :59.  
(MIRA 14:12)

(Sayan Mountains—Geology, Stratigraphic)

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Trudy Lab. ozeroved. 5:86-115 '57. (MLRA 10:9)  
(Climatology)

GRIBOYEDOV, D.N., professor; ~~PREDTECHENSKAYA, I.A., dotsent~~; VOLOTSKAYA,  
S.L., inzhener; SELIVANOVA, N.P., inzhener.

The use of hydrogen peroxide for bleaching cotton fabrics of  
doubled yarns. Tekst.prom. 16 no.2:36-39 P '56. (MLRA 9:5)  
(Hydrogen peroxide) (Cotton finishing) (Bleaching)

PREDTECHENSKIY, S.N.

Reviews. Prikl. mekh. 1 no.6:132-134 '65.

(MIRA 18:7)

16G7

PREDTECHENSKIY, V.

USSR/Civil Air Defense 2107.000

Feb 1948

"City Construction and Problems of Defense," V. Predtechenskiy, P. Yartsev, 1 1/3 pp

"Za Oboronu" Vol XXIV, No 2

L Generally discusses historical development of cities in accordance with defense needs. Mentions plans by architects, Vol'f and L. B. Velikovskiy, developed in relation to requirements set up by MPVO (Local Anti-aircraft Defense), and still in theoretical stage. Emphasizes need of such plans (including underground cities, bomb shelters, etc) to combat modern air warfare methods.

LC

16G7

PREDTECHENSKIY, V. E., BOROVSKAYA, V. M. and MARGOLINA, L. T.

Laboratornye Metody Issledovaniia (Methods of Laboratory Investigation), 803 p.,  
Medgiz, Moscow, 1950.

PREDTECHENSKIY, V. E.; BOROVSKAYA, V. M.; MARGOLINA, L. T.

Laboratornie Metodi Issledovaniya (Methods of Laboratory Research), Moscow, 1950.

BLOKHIN, Boris Nikolayevich; SMIRNOV, N.A.A, prof., retsenzent;  
 SPIRIDONOVA, O.M., dots., kand. tekhn.nauk, retsenzent;  
 CHERNOV, T.P., prof., retsenzent; PREDTECHENSKIY, V.M.,  
 prof., doktor tekhn. nauk, retsenzent; RUFFEL', N.A., dots.,  
 retsenzent; ZAYTSEV, A.G., prof., retsenzent; DROZDOV, A.G., inzh.;  
 GALITSKIY, V.N., inzh., retsenzent; ZHELUDKOV, V.I., inzh.,  
 nauchn. red.; LYTKINA, L.S., red.; DASIMOV, D.Ya., tekhn. red.

[Technology of the construction industry] Tekhnologiya stroi-  
 tel'nogo proizvodstva. Moskva, Gosstroizdat, 1963. 263 p.  
 (MIRA 17:1)

1. Zaveduyushchiy kafedroy stroitel'nogo proizvodstva Lenin-  
 gradskogo inzhenerno-stroitel'nogo instituta (for Smirnov).
2. Kafedra stroitel'nogo proizvodstva Leningradskogo inzhene-  
 rno-stroitel'nogo instituta (for Spiridonova).
3. Zavedu-  
 yushchiy kafedroy stroitel'nogo proizvodstva Moskovskogo  
 inzhenerno-stroitel'nogo instituta imeni V.V.Kuybysheva  
 (for Chernov).
4. Moskovskiy inzhenerno-stroitel'nyy institut  
 imeni V.V.Kuybysheva (for Predtechenskiy, Ruffel').
5. Zave-  
 duyushchiy kafedroy stroitel'nykh materialov Moskovskogo ar-  
 khitekturnogo instituta (for Zaytsev).
6. Glavnyy inzhener  
 Moskovskogo arkhitekturno-planirovochnogo upravleniya (for  
 Drozdov).
7. Direktor Moskovskogo domostroitel'nogo kombi-  
 nata No.1 (for Galitskiy).



SHALAMOV, N.P., kand.tekhn.nauk; PRMDTECHENSKIY, V.M., kand.tekhn.nauk,  
nauchnyy red.; YEGOROVA, N.O., red.izd-va; RUDAKOVA, N.I.,  
tekhn.red.

[All-purpose industrial buildings] Universal'nye promyshlennye  
zдания. Moskva, Gos.izd-vo lit-ry po stroit., arkhitekt. i stroit.  
materialam, 1959. 80 p. (MIRA 13:6)  
(Factories--Design and construction)

PREDTECHENSKIY, V.M., kand. tekhn. nauk; IL'INSKIY, V.M., kand. tekhn. nauk

Performance qualities and maintenance of industrial buildings.  
Prom. stroi. 37 no.11:38-43 N '59. (MIRA 13:2)

1. Moskovskiy ordena Trudovogo Krasnogo Znameni inzhenerno-stroitel'nyy  
institut im. V.V. Kuybysheva.  
(Industrial buildings--Maintenance and repair)

SERBINOVICH, P.P.; BOLDYREV, A.K., kandidat tekhnicheskikh nauk, retsenzent; PREDTECHENSKIY, V.M., kandidat tekhnicheskikh nauk, nauchnyy redaktor; YEGOROVA, N.O., redaktor; DAKHNOV, V.S., tekhnicheskii redaktor; VORONIN, K.P., tekhnicheskii redaktor.

[Architectural building elements] Arkhitekturnye konstruksii zdani. Moskva, Gos. izd-vo lit-ry po stroitel'stvu i arkhi-  
tekture, 1952. 332 p. [Microfilm] (MLRA 7:12)  
(Building)

SHALAMOV, N.P., kandidat tekhnicheskikh nauk; PREDTECHENSKIY, V.M.,  
kandidat tekhnicheskikh nauk, redaktor; YEGOROVA, N.O., redaktor;  
VORONIN, K.P., tekhnicheskii redaktor

Standardization of industrial plants and prefabricated construction  
elements. Nauchnoe soobshchenie TSentral'nogo nauchno-issledovatel'-  
skogo instituta promyshlennykh sooruzhenii no.8:3-74 '54. (MIRA 7:10)  
(Factories--Design and construction) [Microfilm]  
(Building--Standards)

PREDTECHENSKIY, V. M.

IL'INSKIY, Vladimir Mikhaylovich, kandidat tekhnicheskikh nauk;  
PREDTECHENSKIY, V.M., kandidat tekhnicheskikh nauk, redaktor;  
~~KOSTOVISSVA, M.I., redaktor; MEDVEDEV, L.Ya., tekhnicheskij~~  
redaktor.

[Planning walls and roofs of buildings taking into consideration  
physical and climatic influences] Proektirovanie ograzhdalushchikh  
konstruktsii zdaniy s uchetom fiziko-klimaticheskikh vozdeistviy.  
Moskva, Gos.izd-vo lit-ry po stroitel'stvu i arkhitekture, 1955.  
238 p. (MLRA 8:11)

(Building)

VARGAZIN, Boris Nikolayevich, kand.tekhn.nauk; VELIKOVSKIY, Lev Borisovich, kand.tekhn.nauk; POLYAKOV, N.Kh., prof., retsentsent; FISENKO, A.S., prof., retsentsent; PREDTECHENSKIY, V.M., kand.tekhn.nauk, red.; FRIDBERG, G.V., red.izd-va; EL'KINA, E.M., tekhn.red.

[Fundamentals of planning and providing facilities for settlements and industrial establishments] Osnovy planirovki i blagoustroistva naselennykh mest i promyshlennykh predpriatii. Pod red. V.M.Predtechenskogo. Moskva, Gos.izd-vo lit-ry po stroit., arkhitekt. i stroit.materialam, 1959. 229 p. (MIRA 12:7)

1. Chlen-korrespondent Akademii stroitel'stva i arkhitektury SSSR (for Polyakov).
  2. Deystvitel'nyy chlen Akademii stroitel'stva i arkhitektury SSSR (for Fisenko).
- (Factories)                      (City planning)

PREDTECHENSKIY, V.M.

3-2-13/32

AUTHOR: Predtechenskiy, V.M., Dotsent, Candidate of Technical Sciences,  
Yudin, V.A., Dotsent, Candidate of Technical Sciences

TITLE: Planning of Graduation Theses for Construction and Architectural Fields (Diplomnoye proyektirovaniye na stroitel'nykh i arkhitekturnykh spetsial'nostyakh)

PERIODICAL: Vestnik vysshey shkoly, Feb 1957, # 2, p 51-53 (USSR)

ABSTRACT: Complying with the decisions of the Tsk KPSS and the SSSR Council of Ministers, the architectural faculties of the higher educational institutions have to a large extent changed the contents of the graduating theses and the method of their completion, thus improving the training of construction-engineers and architects. Most of these theses or works are devoted to subjects characteristic of modern building. The author tells of these works and points out the shortcomings still prevalent in the building and architectural institutes, calls attention to more appropriate ways of planning and preparing the theses and makes recommendations in regard to the activity of the board of examiners which rates such theses. He points out that many students only copy standard schemes

. Card 1/3

3-2-13/32

Planning of Graduation Theses for Construction and Architectural Fields

and constructions from technical documents, reference books and institute materials. The result is a copy of a design which cannot be given a favorable rating as it does not indicate the student's capability to solve independently difficult engineering problems. The author attributes this result to the unsatisfactory work of the teachers and to the students' poor knowledge of the achievements in science of construction at home and abroad. It is suggested that the students search for new schemes complying with up-to-date requirements, reduction in cost and increase in quality. For this purpose the institutes should extend their contacts with organizations planning to erect new buildings. The author quotes the example of the Moscow and Leningrad engineering and building institutes which received orders for the design of ferro-concrete hangar-workshops for aeroplanes of the - 104 type. The author also objects to the lack of scientific research in most of the theses and states that, as a rule, manuals for the technico-economical evaluation of plans, reference books, tables, methodical material, etc. are not available. The author suggests that every year an

Card 2/3



3-2-13/32

Planning of Graduation Theses for Construction and Architectural Fields

exhibit of students' theses be arranged by the higher educational institutions at which prizes for the best theses should be awarded. He refers to such similar practice by the Moscow Engineering and Building Institute and the Moscow Architectural Institute. In conclusion he criticizes the work of the board of examiners who do not display the required interest and conscientiousness.

AVAILABLE: Library of Congress

Card 3/3

OSIPOV, Lev Georgiyevich, kandidat tekhnicheskikh nauk; SERBINOVICH, Pavel Petrovich, inzhener; KRASENSKIY, Viktor Yevgen'yevich, inzhener; ~~PREDTECHENSKIY, V.M.~~, kandidat tekhnicheskikh nauk, retsenzent; ~~TREPENENKOV, R.I.~~, kandidat tekhnicheskikh nauk, nauchnyy redaktor; KOTIK, B.A., redaktor izdatel'stva; PERSON, M.N., tekhnicheskiy redaktor

[Public and industrial buildings] Grazhdanskie i promyshlennye zdaniia. Moskva, Gos.izd-vo lit-ry po stroit. i arkhitekt., Pt.1. [Architectural and structural designs and building elements] Arkhitekturno-konstruktivnye skhemy i elementy zdaniia. Pod obshchey red. L.G.Osipova. 1957. 375 p. (Building)

(MLRA 10:9)

PREDTECHENSKIY, V.Ye.; SMIRNOVA, L.G., red.; KOST, Ye.A., red.

[Manual for clinical laboratory studies] Rukovodstvo po klini-  
chskim laboratornym issledovaniyam. Izd.5., perer. i dop. Pod  
red. L.G.Smirnovoi i E.A.Kost. Moskva, Medgiz, 1960. 962 p.  
(MIRA 14:10)

(PATHOLOGY—LABORATORY MANUALS)

ACC NR: AP6021565

(A) SOURCE CODES: UR/0416/66/000/003/0080/0083

AUTHOR: Predtechenskiy, Ye. (Major, Engineer)

ORG: None

TITLE: Production-line method applied to the major overhaul of engineering equipment

SOURCE: Tyl i snabzheniye sovetskikh vooruzhennykh sil, no. 3, 1966, 80-83

TOPIC TAGS: production engineering, military engineering

ABSTRACT: A new production-line method used successfully by many Soviet industrial mills and plants is discussed from the standpoint of its application to overhaul pipelines in military workshops and maintenance depots. This method, being introduced first by the Novocherkassk Electric Locomotive Works, is already in use at 360 enterprises and in development at about 1000 plants. The method consists in planning the manufacturing operations with a certain fixed advance in time with respect to the operations performed at various assembly stations. The routing of materials and parts through different stages is controlled by preparing special "proportionality" graphs and "time-lag" tables. The possibility of introducing this method in repair depots is considered on the basis of the one-year experience acquired by a military unit overhauling various types of motor vehicles. The determination of basic numbers of repaired items (vehicles, for instance) and of the time element (usually a day) is discussed and some examples are examined. The

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ACC NR: AP6021565

planning of the time advance (in days) and of the amount of items prepared ahead of time is also discussed and an example of a control table is presented. The monthly inventory control over unfinished items is regularly conducted and the results are expressed in a table. The charting of the work progress, the preparation of various control cards and their arrangement in file cabinets are discussed and illustrated by various descriptive examples. In general, the evaluation of production lag in time and amount is expressed in item-days and recorded in special lag tables. Orig. art. has: 2 tables.

SUB CODE: 13, 15/ SUBM DATE: None

Card 2/2

PREDETSCHENSKAJA, A.A.  
B.L. ISATSCHEKO, CR, 1934, 1, 507-509

**CIA-RDP86-00513R0013429**

PREDVODITELEV, A. A.; POZHANSKIY, V. N.; STEPANOV, V. M.

"Issledovanie dislokatsiy i kristallakh  $\text{NzCl}$ ."

report submitted for 6th Gen Assembly, Intl Union of Crystallography, Rome,  
9 Sep 63.

Physics Faculty, Univ of Moscow.



PREDVODITELEV, A. A.

Defended his Candidates dissertation in the Physics Faculty of Moscow State University on 2 June 1952.

Dissertation: "Creepage in Dynamic Loads."

SO: Vestnik Moskovskogo Universiteta, Seriya Fiziko-Matematicheskikh i  
Yestestvennykh Nauk, No. 1, Moscow, Feb 1953, pp 151-157: transl. in  
M-29732, 12 April 54, [REDACTED]

*Predvoditeley, H. H.*

92/1112

539.434

Theory of Dynamic Creep

Vyestn. Moskovsk. Univ.

(Fiz.)

8(8), 79-86

1953

62

A. A. Predvoditeley, B. A. Smirnov U. S. S. R.  
An analysis is given of the causes of the increase in creep  
under varying loads. It is suggested that the increase in  
creep is due to local rise in temperature over the slip  
planes, thus facilitating slip. A theory of dynamic creep  
is proposed, based on the Becker theory of the after-  
effect, which treats the metal as a granular structure  
and includes a rate factor. (Bibl. 8)  
(Translated in NACA tech. Memo., (1330), 12pp., Sept., 1955,  
U. S. A.)

①

PREDVODITELEV, A. A.

USSR/Chemistry - Physics

Card 1/1

Authors : Smirnov, B. A., and Predvoditelev, A. A.

Title : Measurement of the speed of sound in a binary  $\text{CH}_3\text{OH} - \text{C}_6\text{H}_{14}$  system having a critical solubility temperature

Periodical : Zhur. Fiz. Khim., 28, Ed. 5, 906 - 913, May 1954

Abstract : The speed of sound measured in the upper and lower phases of a binary  $\text{CH}_3\text{OH} - \text{C}_6\text{H}_{14}$  system was found to be of the same nature as in a liquid-vapor system with the exception that the heavier phase in the binary system plays the role of the vapor and the much lighter phase assumes the role of the liquid. The basic features of the installation especially constructed for measuring the speed of sound in binary mixtures are described. Five references: 4-USSR and 1-USA. Graphs, drawings.

Institution : The M. V. Lomonosov State University, Moscow

Submitted : Oct. 8, 1953

*PREDVODITELEV, A. A.*

USSR/Chemistry - Physical chemistry

Card 1/1 Pub. 147 - 8/27

Authors : Smirnov, B. A.; and Predvoditelev, A. A.

Title : Density and compressibility of a binary  $\text{CH}_3\text{OH} - \text{C}_6\text{H}_{14}$  mixture having the maximum critical solubility point and a comparison with values of these parameters in the critical zone of a liquid-vapor system.

Periodical : Zhur. fiz. khim. 28/9, 1581-1590, Sep 1954

Abstract : The change in density of a binary  $\text{CH}_3\text{OH} - \text{C}_6\text{H}_{14}$  mixture with a maximum critical blending temperature of 18 - 46<sup>o</sup>, including the critical zone, was investigated in relation to the concentration. The compressibility of the system was determined by measuring the speed of sound in the mixture. The problem regarding the analogy between the critical state of a liquid-vapor system and a binary mixture with max. critical blending temperature was discussed. The role of the thermodynamic and fluctuation factors in the critical zone of both systems is explained. Seven references: 6-USSR and 1-Canadian (1947-1954). Graphs; drawing.

Institution : The M. V. Lomonosov State University, Moscow

Submitted : December 7, 1953

PREDVODITELEV, A. A.

TI353\* Creep of Aluminum Under a Dynamic Load. Pol-  
zuchest' alluminia pri dinamicheskikh nagruzkakh. (Rus-  
sian.) A. A. Predvoditelev and B. A. Smirnov, Moskovskogo,  
Universiteta, Vestnik, Seriya Fiziko-Matematicheskikh i Estest-  
vennykh Nauk, v. 2, no. 3, Mar, 1956, p. 51-55.  
Creep tests of Al under pulsating dynamic loads show sharp  
increase in creep, similarity between dynamic and static creep  
curves, and conformity of experimental with theoretical data  
which permits explaining results by an intensification of slide  
processes in metallic grains under a dynamic load. Diagram,  
graphs. 2 ref.

Strict  
1/  
- Chem Molecular Physics  
JGP  
post

TYAPUNINA, N.A.; PREDVODITELEV, A.A.

Investigations of spiral etching figures in cadmium polycrystals.  
Izv. AN SSSR. Ser. fiz. 22 no.10:184-189 0 '58. (MIRA 12:3)

1. Moskovskiy gosudarstvennyy universitete im. M.V. Lomonosova.  
(Cadmium--Etching)

SOV/126-7-6-8/24

AUTHORS: Predvoditelev, A.A. and Tyapunina, N. A.  
TITLE: Etch Pits and Dislocations in Mono and Polycrystals of Cadmium  
PERIODICAL: Fizika metallov i metallovedeniye, 1959, Vol 7, Nr 6, pp 855-861 (USSR)

ABSTRACT: In this paper a method for the etching of cadmium is described and an attempt is made to correlate the various characteristic distributions of pits in non-deformed and deformed crystals with the dislocation theory. The majority of the specimens investigated were made of 99.957% pure cadmium (0.02% Pb, 0.01% Zn, 0.01% Cu and 0.003% Fe). Micro-sections were polished electrolytically in an electrolyte of the following composition: two parts ortho-phosphoric acid, two parts glycerine and one part water (Ref 2). A stainless steel plate was used as the cathode. The electro-polishing process and etching was controlled by the electrode voltage, the optimum voltage being 2.1 to 2.2 V. The polishing was carried on for 9 to 12 minutes. Etching was carried out in the same electrolyte but at lower voltage (0.9 to 1.0 V) for various lengths of time between 20 and 40 secs.

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SOV/126-7-6-8/24

# Etch Pits and Dislocations in Mono and Polycrystals of Cadmium

Sometimes etching occurred during the polishing process, in which case the sections were investigated microscopically without further etching. Individual pits had different geometrical shapes depending on the orientation of the crystal, namely, hexagonal, rectangular or triangular. However, in a number of cases the pits had an irregular shape, their cross-section being practically oval or round. In non-deformed crystals the etched pits were arranged in the form of a chain, often coinciding with the direction of growth, or they appeared dispersed. Fig 1 shows a photomicrograph of a chain of dislocations of variable density in a polycrystal of cadmium at a large magnification. The equilibrium of a linear chain of dislocations lying in one slip plane has been theoretically considered by Eshelby et al. (Ref 4). According to this theory, the distances  $x$  between an obstruction and the dislocations, at uniform macroscopic stresses with identical Burgers vectors for all dislocations, must be proportional to the squares of the radicals of the Bessel function.

Card 2/4



SOV/126-7-6-8/24

# Etch Pits and Dislocations in Mono and Polycrystals of Cadmium

$$X = \frac{Gb}{(G\tau_0(1-\nu)n\pi)} j^2$$

where G is the modulus of slip,  
b the Burgers vector,  
 $\tau_0$  the macroscopic shear stress,  
 $\nu$  is the Poisson coefficient and  
n the total number of dislocations in the chain.

If the etched pits correspond to the places at which dislocations occur, the graph representing the dependence of the distance between the obstruction and the corresponding pit on the square of the Bessel function root must be a straight line, see graph, Fig 2. In Fig 3 a photomicrograph is reproduced of a chain of dislocations disposed between two obstructions. In Fig 4 etch pits in a plastically deformed monocrystal are shown (a - appearance of a specimen after removal of slip lines from its surface; b - a redeformed specimen). In Fig 5 etch pits in a twinned cadmium monocrystal are shown. In Fig 6 spiral etch figures can be seen in polycrystalline

Card 3/4

SOV/126-7-6-8/24

Etch Pits and Dislocations in Mono and Polycrystals of Cadmium

cadmium after annealing. In Fig 7 a single spiral is shown at a large magnification. In Fig 8 various shapes of spiral etch figures are shown. It is not possible yet to explain the origin of complicated etch figures. It can be assumed that they are brought about by spiral dislocations in the body of the specimen. Acknowledgments are made to Professor Ye. G. Shvidkovskiy for his valued advice and constant interest in the work. There are 8 figures and 9 references, 1 of which is Soviet, 7 English and one International.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet imeni  
M. V. Lomonosova (Moscow State University imeni  
M. V. Lomonosov)

SUBMITTED: August 5, 1957  
Card 4/4

S/188/60/000/001/007/010  
B019/B056

AUTHORS: Predvoditelev, A. A., Smirnov, B. A.  
TITLE: The Theory of the Temperature Dependence of the Creeping  
of Metals  
PERIODICAL: Vestnik Moskovskogo universiteta. Seriya 3, fizika,  
astronomiya, 1960, No. 1, pp. 70 - 75

TEXT: A theory of the temperature dependence of the creeping of metals is suggested, in which the creeping of a polycrystalline body is considered to be a combination of elementary processes on the individual grains. The authors refer to a paper by Becker (Ref. 1) of 1925, in which the latter derived expression (1) for creeping. By taking the temperature dependence of the quantities entering into this formula into account, the temperature dependence of the creeping deformations is found. Two formulas are obtained, which make it possible to calculate the temperature dependence of creeping under static and dynamic loads. These formulas were experimentally checked by means of a device for dynamic creep testing at increased temperatures, which has been described in

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The Theory of the Temperature Dependence of  
the Creeping of Metals

S/188/60/000/001/007/010  
B019/B056

one of the two authors' older papers (Ref. 5). The diagrams of Figs. 2 to 5 graphically represent the dependences of the dynamic creeping of aluminum on the temperature under average stresses of 0.62, 0.76, 0.93, and 1.18 kg/mm<sup>2</sup>. Up to 300°C, good agreement between theory and experiment was found. Above 300°C, considerable deviations occur (Fig. 6). These deviations are ascribed to the influence of grain boundaries upon creeping. There are 6 figures and 6 references: 3 Soviet and 3 German.

ASSOCIATION: Kafedra molekulyarnoy fiziki (Chair of the Physics of  
Molecules)

SUBMITTED: October 9, 1959

Card 2/2

S/070/60/005/003/019/024/XX  
E132/E460

AUTHORS: Predvoditelev, A.A., Tyapunina, N.A. and Gysenkov, A.S.  
TITLE: An Investigation of the Spatial Distribution of  
Dislocations in Cadmium ✓  
PERIODICAL: Kristallografiya, 1960, Vol. 5, No. 3, pp. 432-436  
+ 2 plates

TEXT: A special microscope stage has been constructed for observing the distribution of dislocations in the surface of a cadmium crystal during the actual process of electrolytic etching in a solution of one part orthophosphoric acid, one part water and two parts glycerine. The crystal was suspended in the electrolyte, chosen to have the same refractive index as the immersion oil, only 0.2 mm away from a thin glass window in the base of the cell which formed the cover slip for microscopic examination from below with a metallurgical microscope. The electrolyte was pumped past the surface to give uniform conditions and a cinematograph record was made of the surface which dissolved at the rate of 0.4 microns per minute. Various crystallographic planes were studied. The variety of the etch figures observed can be explained using a single unified picture of the dislocational Card 1/2 ✓

S/070/60/005/003/019/024/XX  
E132/E460

An Investigation of the Spatial Distribution of Dislocations in Cadmium

structure and the presence of configurations in the crystals corresponding to different stages of active Frank-Read sources. The nature of the distribution of dislocations in the crystal corresponds basically to the presence of screw dislocations in 1000 planes with Burger's vectors  $b = a$  lying in these planes. A count of the spiral formation in the basal plane give a dislocation density of  $1.3 \times 10^5/\text{cm}^2$ . In the  $10\bar{1}0$  plane the density is  $3.1 \times 10^6/\text{cm}^2$  if calculated from basal plane observations or  $2.6 \times 10^6$  from the number of lines on the prism plane. The mean distance between planes in which spiral formation occurs is  $2.5 \mu$ , which agrees roughly with earlier measurements of the distances between slip bands in deformed cadmium crystals. Acknowledgments to Ye.G.Shvidkovski for his advice. There are 8 figures and 10 references: 3 Soviet, 1 German and 6 English.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova  
(Moscow State University im. M.V. Lomonosov)

SUBMITTED: December 15, 1959

Card 2/2

S/070/60/005/003/020/024/XX  
E132/E460

AUTHORS: Yurasova, V.Ye., Pavlovskaya, E.A., Tyapunina, N.A.  
and Predvoditelev, A.A.

TITLE: The Application of Ionic Etching For Showing Up  
Dislocations in Metallic Crystals 1<sup>b</sup>

PERIODICAL: Kristallografiya, 1960, Vol.5, No.3, pp.437-440  
+ 1 plate

TEXT: Etching is the most widely used method of revealing the emergence of dislocations at a crystals surface and is usually chemical or electrolytic. To show the dislocations successfully it is essential that impurities should be concentrated in them giving a Cottrell atmosphere. The method of ionic etching has been studied as it has the advantage of producing no superficial oxidation and of being usable over a wide temperature range. Dislocations are shown up by the selective sputtering of ions from the disturbed places in the lattice. Cadmium crystals have been used with zinc as the decorating impurity. Sputtering was carried out in a glow discharge in air or neon at  $10^{-1}$  to  $10^{-2}$  mm Hg. The best conditions were found to be: current density 20 ma/cm<sup>2</sup>, voltage 1500 to 2000, duration 20 min and pressure  $10^{-1}$  mm Hg.

Card 1/2

S/070/60/005/003/020/024/XX  
E132/E460

The Application of Ionic Etching for Showing Up Dislocations in  
Metallic Crystals

Electrolytic etching of the same specimens was carried out for comparison. The results show a very close correspondence between the two methods. A particular dislocation configuration is quantitatively analysed. Acknowledgments are expressed to Professors G.V.Spivak and Ye.G.Shvidkovskiy for their interest in the work and to V.L.Indenbom for useful advice. There are 5 figures and 9 references: 4 Soviet and 5 English.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet  
im. M.V.Lomonosova (Moscow State University  
im. M.V.Lomonosov)

SUBMITTED: September 9, 1959

Card 2/2



PREDVODITELEV, A. A., SMIRNOV, B. A.

Theory of the effect of temperature on the creep of metals. Vest.  
Mosk un. Ser. 3: Fiz., astron 15 no. 1: 70-75 '60. (MIRA 13:10)

1. Kafedra molekulyarnoy fiziki Moskovskogo universiteta.  
(Creep of metals)

21116

188200 1418

S/120/61/000/002/031/042

10 9230

E032/E114

AUTHOR: Pradvoditelev, A.A.

TITLE: An apparatus for studying the creep of metals,  
including the determination of the beginning of the  
process

PERIODICAL: Pribery i tekhnika eksperimenta, 1961, No.2, pp.164-166

TEXT: The apparatus described in the present paper is  
illustrated schematically in Fig.1. One of the ends of the  
specimen under investigation 2 (a thin wire) is held in position  
by the chuck 1. The latter can be displaced by means of the  
screw 3 which can be rotated by the electrical motor 4. The  
other end of the wire is held by the chuck 5 and is loaded by the  
load 7 which rests on three knife edges 8 attached to the  
support 9. The latter is insulated electrically from the rest of  
the apparatus by the ebonite ring 10. The lower part of the  
device contains the electromagnetic relay 11 and the moveable  
iron core 12 with a cone shaped seal at the end. The creep is  
measured by reflecting light off the mirror 15. The entire  
apparatus is thermostated by placing it in the double walled glass  
Card 1/5

21416

S/120/61/000/002/031/042

An apparatus for studying the creep .. E032/E114

envelope 16. In the non-working position the load 7 rests on the knife edges 8 so that the wire under investigation is not loaded. As soon as the motor 4 is switched on, the screw 3 rotates and raises the chuck 1. The wire becomes stretched and lifts the load 7. This instant is looked upon as the beginning of the creep process. Up to the instant at which the load 7 is lifted off the knife edge there is a closed electrical circuit consisting of the support 9, the lower chuck 5, the load 7, the specimen 2 and the upper chuck 1. As soon as the rod is lifted the electrical circuit is broken and this operates the relay system which brings the motor 4 to rest and switches on the relay 11. This brings down the support 9 leaving sufficient room for the extension of the specimen and the rod. The absolute elongation of the specimen is determined as follows (Fig.4). The light rays leaving the condenser K<sub>1</sub> pass through the grid R and reach the mirror D through the lens K<sub>2</sub>. After being reflected from this mirror they pass through K<sub>2</sub> again and form an image on the slit C of the photocell. A shutter T is provided and is opened by the relay mentioned above at the beginning of the creep process.

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S/120/61/000/002/031/042

An apparatus for studying the creep...E032/E114

Since the slit C and the grid lie in the same plane the image of the grid is not magnified. As the specimen wire begins to creep the elongation is converted into the rotation of the mirror D (usual optical lever arrangement). If the width of the slit C is equal to half the grid constant then as the specimen extends, bright and dark bands are alternately projected onto the slit giving rise to a periodic change in the photocurrent. The photocurrent changes are recorded by a pen recorder and the creep is determined from the number of the "photopeaks" on the chart. A typical result obtained for silver wire at room temperature and subjected to a stress of 2.5 kg/mm<sup>2</sup> is shown in Fig.3. The total duration of the experiment was 400 hours. The above method easily ensures an accuracy of one part and 10<sup>5</sup>.

There are 4 figures and 6 references: 4 Soviet-bloc and 2 non-Soviet-bloc.

ASSOCIATION: Fizicheskiy fakul'tet MGU  
(Physics Department of MGU)

SUBMITTED: May 11 1960

Card 3/5

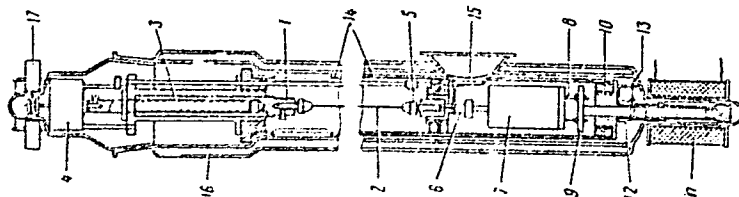
21418

S/110/61/000/002/031/042

1032/E114

An apparatus for studying the ...

Fig. 1



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21418

S/120/61/000/002/031/042

An apparatus for studying the creep.. E032/E114

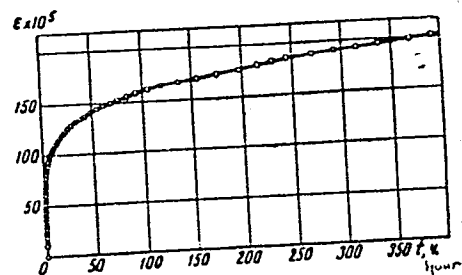


Fig.3

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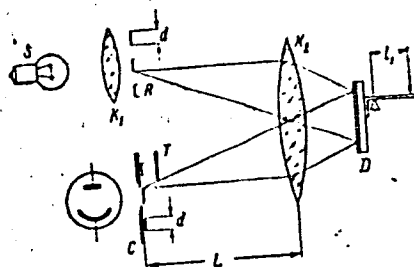


Fig.4

ROZHANSKIY, V.N.; PARVOVA, Ye.V.; STEPANOVA, V.M.; PREDVODITELEV, A.A.

Kinetics of selective etching and polishing of NaCl crystals.  
Kristallografiia 6 no.5:704-713 S-O '61. (MIRA 14:10)

1. Institut kristallografii AN SSSR i Moskovskiy gosudarstvennyy  
universitet imeni Lomonosova.  
(Salt) (Crystallography)

S/032/61/027/001/032/037  
B017/B054

AUTHORS: Tyapunina, N. A., Predvoditelev, A. A., and Bystrikov, A.S.

TITLE: Apparatus for Observing and Microfilming the Process of  
Electrolytic Polishing

PERIODICAL: Zavodskaya laboratoriya, 1961, Vol. 27, No. 1, pp. 112-114

TEXT: Films were shot to study the shape and spatial arrangement of grain boundaries, cracks, inclusions, and dislocations in metals during etching and electrolytic polishing under the microscope. A cuvette for a metallographic microscope was developed for continuous observing and photographing of electrolytic polishing and etching with magnifications of up to 1200. The following Zeiss objectives were found suitable for photographing the etching process: Apochromat 15 X, A 0.30, F = 15.7; Apochromat 40X, A 0.65, F = 6.16, and Apochromat 90X, A 1.00, F = 2.77. The best results were obtained with an immersion lens. For film-shooting, the photographic camera of the microscope was substituted by a movie camera. There are 2 figures and 4 references: 3 Soviet. V

Card 1/2



Apparatus for Observing and Microfilming  
the Process of Electrolytic Polishing

S/032/61/027/001/032/037  
B017/B054

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova  
(Moscow State University imeni M. V. Lomonosov)

✓

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L 43577-65 EWT(1)/EWT(m)/T/EWP(t)/EEC(b)-2/EWP(b)/EWA(c) Pi-4 IJP(c)

JD/GG

ACCESSION NR: AT5009587

Z/0000/52/000/000/0255/0258

AUTHOR: Shvidkovskiy, Ye. G.; Shaskol'skaya, M. P.; Tyapunina, N. A.; Predvoditelev, A. A.; Durgaryan, A. A.

TITLE: Relationship between the nonelastic properties of solids and dislocations in crystals

SOURCE: Konferentsiya o monokristalakh. 4th. Turnov. 1961. Sbornik referatov.  
Turnov, VUM, 1962, 255-258

TOPIC TAGS: internal friction, crystal dislocation, plastic deformation, metal crystal structure, copper, tin, zinc, cadmium, bismuth, lithium fluoride crystal, crystal defect, x-ray bombardment

ABSTRACT: To elucidate the mechanism of internal friction and the role of dislocations therein, the authors carried out experiments in order to determine the dependence of internal friction on preliminary plastic deformation in single-crystal and polycrystalline samples of copper, tin, zinc, cadmium, and bismuth. A quartz resonator was employed in the measurements. All the metals showed a maximum in this dependence at 40 - 240 cps. An evaluation of the experimental data for metals, made from the two standpoints

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L 43577-65

ACCESSION NR: AT5009587

2

of dislocation relaxation and temperature relaxation, shows that both of these concepts do not contradict the experiment. Lithium fluoride crystals were then studied in order to gain further insight into the relative roles of these two mechanisms of relaxation. In this case, the study of internal friction in relation to preliminary deformation showed that in lithium fluoride crystals the internal friction and dislocation density remain constant in the region of elastic deformation. As in metals, the rise in internal friction begins simultaneously with the start of bulk volume plastic deformation. As the preliminary deformation is increased further, the rise in internal friction and dislocation density becomes parallel. Lithium fluoride samples subjected to x-ray bombardment before and after deformation were also studied, and the results are interpreted in terms of point defects. Orig. art. has: 5 figures, 8 formulas and 1 table.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet (Moscow State University);  
Moskovskiy institut stali (Moscow Steel Institute)

SUBMITTED: 00

ENCL: 00

SUB CODE: 83, MM

NO REF SOV: 000

OTHER: 000

508  
Card 2/2

The dislocation structure ...

S/070/62/007/003/011/026  
E132/E460

ASSOCIATIONS: Moskovskiy gosudarstvennyy universitet  
im. M.V.Lomonosova (Moscow State University imeni  
M.V.Lomonosov): Institut kristallografii AN SSSR  
(Institute of Crystallography AS USSR)

SUBMITTED: June 14, 1961

Card 2/2

10586  
S/070/62/007/006/015/020  
E132/E435

AUTHOR: Predvoditelev, A.A.  
TITLE:

PERIODICAL: Kristallografiya, v.7, no.6, 1962, 938-945  
The possible interactions of full dislocations in hexagonal close-packed crystals

TEXT: It is shown by theoretical geometrical analysis (by examination of all possible dislocation interactions in hexagonal crystals, taking account of dislocation reactions and the formation of jogs) that glissile jogs are formed in dislocations corresponding to basal glides, on intersecting other dislocations which exist in hexagonal crystals; the glissile jogs do not offer serious impediment to the movement of the dislocations. Consequently, on basal gliding, pinning because of the intersection of dislocations is absent or is very small. It is possible that the case of basal gliding is in some measure connected with this. Thus it follows that plastic deformation along the 0001 plane should not, as a rule, hinder the formation of vacancies. In gliding on pyramidal faces dislocation configurations can easily be formed which can act as Frank-Read Card 1/2

APPROVED FOR

PREDVODITELEV, A.A.; BUSHUYEVA, G.V.; STEPANOVA, V.M.

Investigating the dislocation structure in zinc crystals by  
the method of selective etching. Fiz.met.i metalloved. 14  
no.5:687-692 M '62. (MIRA 15:12)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.  
(Zinc crystals) (Dislocations in metals)

PREDVODITELEV, A. A. and TYAPUNINA, N. A.

"Role of Increase of Dislocations in Plastic Deformation Process."

report presented at the 3rd Conference of Higher Educational Institutes on Strength and Plasticity of Metals, Petrozavodsk State University, 24-29 June 1963

8/181/63/005/002/024/051  
B104/B102

AUTHORS: Predvoditelov, A. A., Spivak, G. V., Kotova, A. M.,  
Yurasova, V. Ye., and Kushnir, F. F.

TITLE: Study of non-decorated dislocations in zinc single crystals  
by ion bombardment

PERIODICAL: Fizika tverdogo tela, v. 5, no. 2, 1963, 542-545

TEXT: This paper is aimed to prove the possibility of detecting "virgin" dislocations by ion bombardment of single-crystal faces. Cylindrical zinc single crystals (2.5 mm in diameter, 50 mm high) were split along the (0001) plane at nitrogen temperature and the faces were bombarded with ions in flowing neon gas. Thin pieces of specimens that had been bombarded with ions on both (0001) planes showed the same etch patterns on both sides. Repeated etching of any one surface section produces no new etch patterns but intensifies those existing. The results from chemical etching and from ion bombardment are consistent. The most favorable experimental conditions are: neon pressure between  $6 \cdot 10^{-2}$  and

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Study of non-decored dislocations ...

S/181/63/005/002/024/051  
B104/B102

$3 \cdot 10^{-2}$  mm Hg, voltage between anode and specimen between 1.5 and 1.75 kv, current density at the specimen  $1.2 \text{ a/cm}^2$ , bombardment period, approximately one hour. There are 5 figures.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov) ✓

SUBMITTED: June 23, 1962 (initially)  
August 29, 1962 (after revision)

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S/181/63/005/002/040/051  
B102/B186

AUTHORS: Rozhanskiy, V. N., Stepanova, V. M., Parvova, Ye. V., and  
Predvoditelev, A. A.

TITLE: The causes of the jump-like motion of dislocations in crystals

PERIODICAL: Fizika tverdogo tela, v. 5, no. 2, 1963, 634 - 639

TEXT: The formation of etching tracks on the (100) face was investigated on two types of NaCl crystals of almost equal composition containing the following impurities Ca 0.05%, Mg 0.001%, Fe 0.03%, Ag 0.1%, Al 0.01%, Sn 0.005%, Si 0.001%. According to the compressibility of the crystals the rigid type was distinguished from the soft type. The dislocation jumps of the rigid crystals are about twice as large as those of the soft ones (10 and 4.5  $\mu$ ).  $V$ , the velocity of the dislocations was measured in dependence on the stress  $\tau$  (kg/cm<sup>2</sup>). In all cases  $\log V$  increased linearly with  $\tau$ , and decreased linearly with  $T^{-1}$ . The straight lines for rigid and soft crystals are in different positions but parallel. The difference of the rigid and soft types consists in a different impurity distribution. The mean dislocation velocity obtained from 20-30 measurements can be described

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The causes of the ...

S/181/63/005/002/040/051  
B102/B186

by  $\bar{v} = A \exp \left( -\frac{U - \gamma \bar{v}}{kT} \right)$  or  $\bar{v} = A \exp \left( \gamma \bar{v} - U/kT \right)$  with  $U = 0.2$  ev,  
 $\gamma = 3.10^{-20}$  cm<sup>3</sup>,  $A = 11$  cm/sec. The first formula is somewhat more probable. The stress and temperature dependence of the mean dislocation velocity is governed by the following factors: periodicity of the potential relief of the lattice, the slowing down at the fixing points that arise because of transverse slipping and cleavage of the moving dislocations in transverse planes; energy spread of the moving dislocations; interaction with point defects and their complexes (impurities, vacancies, interstitial atoms); interaction with other dislocations; interactions with all types of interfaces; interactions with disperse phase separations and interactions with that surface and surface defects. There are 6 figures.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova  
(Moscow State University imeni M. V. Lomonosov) Institut  
kristallografii ANSSSR, Moskva (Institute of Crystallography  
AS USSR, Moscow)

SUBMITTED: September 26, 1962

Card 2/2

S/126/62/014/004/015/017  
E193/E383

AUTHORS: Tyapunina, N.A., Predvoditelev, A.A., Yurasova, V.Ye.,  
Gusarova, S.M. and Zakharov, V.M.

TITLE: Distribution of impurities and dislocations in cadmium  
crystals

PERIODICAL: Fizika metallov i metallovedeniye, v. 14, no. 4,  
1962, 582 - 588

TEXT: It has been established by Borovskiy et al (Kristallo-  
grafiya, 1962, 7, no. 4) that zinc tends to segregate at dis-  
locations in cadmium crystals, the points of emergence of  
dislocations on the surface of a polished specimen being revealed  
by etching pits. It has also been found that in some specimens  
two systems of etch figures can be observed, their dimensions  
being about  $1 - 2 \mu$  and about  $0.1 \mu$ , respectively. The object of  
the present investigation was to elucidate the causes of the  
appearance of these two systems of etch figures by studying the  
effect of the zinc concentration on the size and shape of the  
etching pits. The concentration of zinc in the experimental  
cadmium-zinc alloy specimens ranged from 0.01 - 10%. Electrolytic  
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